

# CHAMP

USU CONSORTIUM  
FOR HEALTH AND  
MILITARY PERFORMANCE



# Enemy Agents



# Overview



- **Smokeless Tobacco**
- **Alcohol**
- **Antihistamines**
- **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**
- **Steroids**
- **Multi-Ingredient Steroid Alternatives**
- **Ephedra**





# Smokeless Tobacco (ST)



## Negative health effects

- **50X higher risk for mouth cancer**
  - *Contains 28 cancer-causing chemicals*
- **Permanent tooth stains**
- **Bad breath**
- **Lip and mouth sores**
- **Tooth decay**
- **↑ blood pressure and heart rate**
- **↑ levels of LDL (bad) cholesterol**





# Nicotine and ST



- **Reported “benefits”**
  - Decreased appetite
  - Maintenance or reduction in body weight
  - Enhances attention
    - $\uparrow$  energy
    - $\downarrow$  pain
- **Detrimental effects**
  - $\uparrow$  blood pressure, heart rate, and breathing rate
  - Tightens blood vessels
  - Stimulates central nervous system
  - Permanent tooth stains

# CHAMP Withdrawal and ST



- **Nicotine withdrawal**
  - Nicotine usage results in drug dependence
  - Cessation of nicotine results in withdrawal symptoms:
    - *Irritability*
    - *Anxiety*
    - *Depression*
    - *Moodiness*
    - *Headaches*
    - *Trouble sleeping*
    - *Poor concentration*
    - *Craving for nicotine*
    - *Increased body weight*
- **RISKS > BENEFITS**





# Alcohol



- **Heavy drinking is a major cause of preventable death!**
- **Effects on health include:**
  - **Damage to heart, liver, and skeletal muscles**
    - **↑ risk for some cancers**
    - **↑ violence**
  - **Interferes with relationships**
  - **Dehydration**
  - **Negatively affects energy processes**
    - **↑ injury rate**
  - **Alcohol-drug interactions**



# CHAMP Antihistamines

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- **Prevalent among all groups of people**
  - Common over-the-counter and prescription medications
- **Effects on health:**
  - ↓ ability to concentrate
  - Delayed reaction time
  - Sleepiness
  - Dry mouth
  - ↑ heart rate
  - Blurred vision
  - Constipation





# NSAIDs or Vitamin M



- **Uses**
  - Treat pain
  - Reduce fever/ inflammation
- **Should be used on a limited basis!**



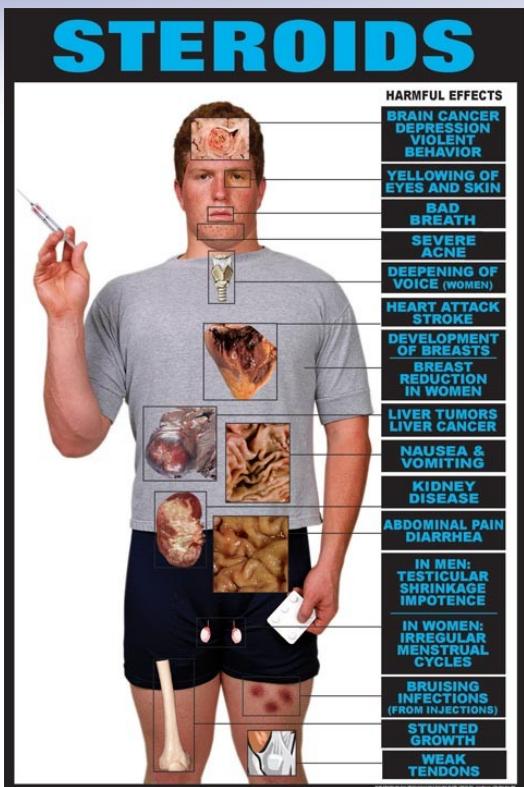


# CHAMP Negative Effects of Regular NSAID Use



- ☒ ↓ effectiveness of daily aspirin use
  - Gastrointestinal bleeding and ulcers
  - May lower serum sodium levels in athletes
  - Contribute to performance and health decrements of athletes
  - Delays healing of muscle, cartilage, ligaments, and tendons

# Anabolic-Androgenic Steroids



- “Designed” to act like testosterone
- Used illegally by athletes to enhance performance and/or improve physical performance because it
  - Increases body mass, lean body mass, strength, and power and
  - Decreases body fat
- Banned by most athletic associations
- Anabolic Steroid Control Act of 2004

Steroids  
(Anabolic-Androgenic)

- **Usage methods**
  - Cycling
  - Stacking
  - Pyramiding



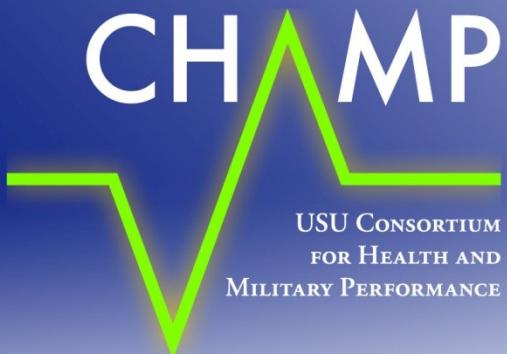


# Cycling and Steroids



- **Multiple doses are taken over a period of time and then stopped for a specific time before beginning a new cycle**
  - A 10 - 12 week application of a single compound, or
  - Combination of different steroids
  - Followed by stopping all steroids for a period of time
- **Purpose:**
  - Reduce risk of side effects





# Stacking and Steroids



- **When two or more types of steroids are taken at the same to increase the effectiveness**
- **Oral and injection drugs may be mixed**
  - This method is commonly used by steroid (ab)users
- **Different types are used so drug tests are passed**

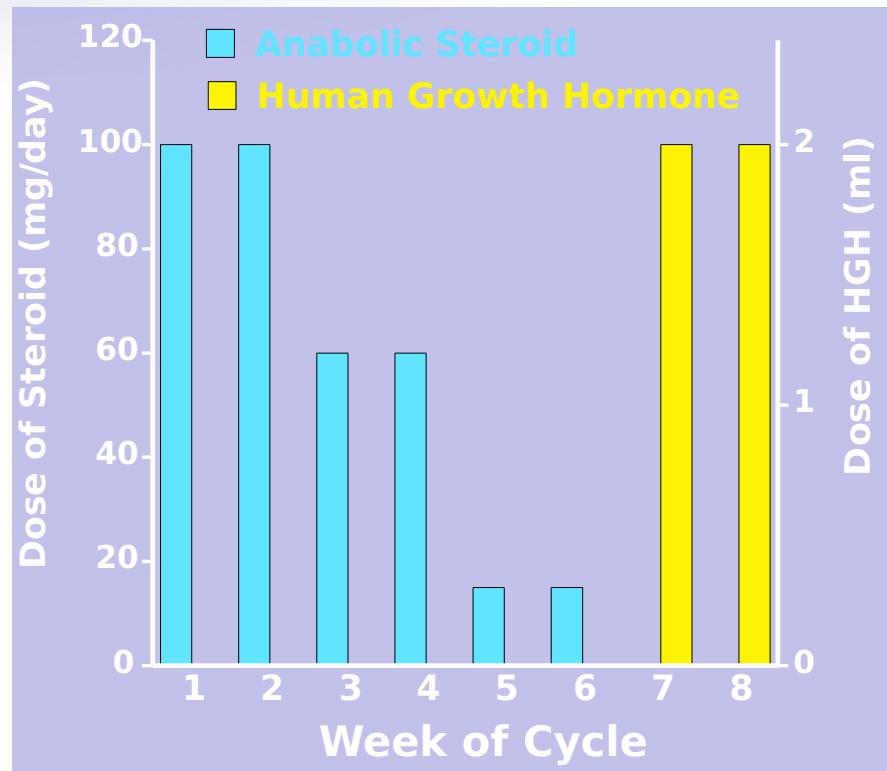




# Pyramiding and Steroids



- **Various paradigms:**
  - **↑ frequency/dosage**
  - **Add various types of steroids**
  - **Followed by ↓ dose and frequency until no drugs are used**





# Health Risks of Anabolic Steroids



## Hormonal System

**Shrinking testicles**  
**Breast enlargement**  
**Infertility**  
**Male-pattern-baldness**  
**Skin**  
**Severe acne**  
**Fluid retention**  
**Oily scalp**  
**Jaundice**

## Cardiovascular System

**↑ in LDL (bad) and ↓ in HDL (good) cholesterol**  
**High blood pressure**  
**Heart attack**  
**Enlargement of heart**  
**Infection**  
**HIV/AIDS**  
**Hepatitis**  
**High blood pressure**

## Liver

**Cancer (prostate, pancreatic)**

**Tumor(s)**

## Psychiatric

**Mania**  
**Delusions**  
**Rage**

**Aggressive behavior**

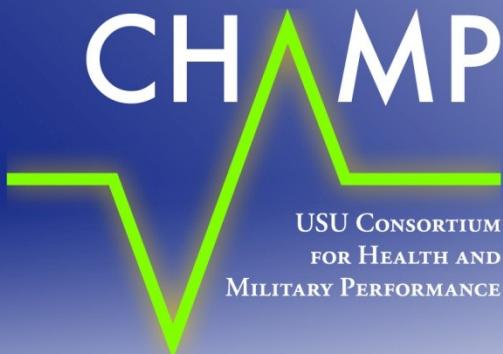


# CHAMP Concerns with Multi-Ingredient Steroid Alternatives



- Not properly tested
- Absolutely no basis to substantiate claims
- Potential for:
  - Harmful side effects, allergic reactions, and toxicities
- Metabolic pathways and waste products from some compounds are unknown
  - Expensive and unlikely to replace benefits of a good diet and sound training program

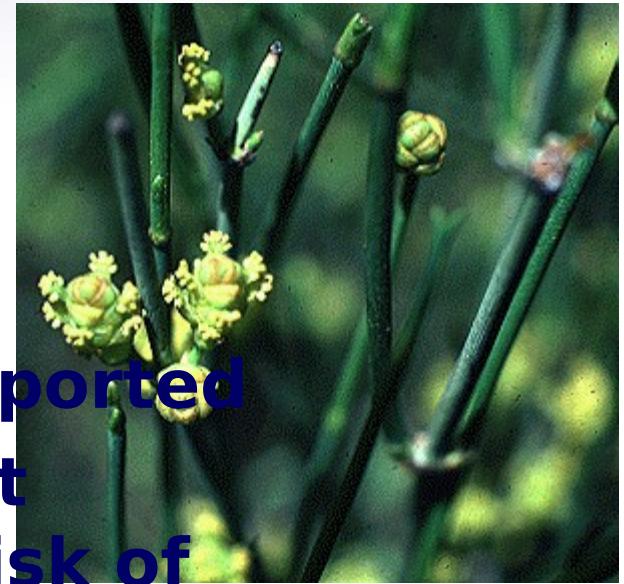




# Ephedra



- **Herb containing several substances called ephedra alkaloids (epinephrine and pseudoepinephrine)**
- **Multiple adverse effects reported**
- **FDA concluded in 2004 that ephedra alkaloids pose a risk of serious adverse events**
- **Ephedra is illegal!**





# Key Points



- **Tobacco is addictive and can cause cancer**
- **Alcohol, in excess, can lead to dehydration and compromise performance**
- **OTC drugs (antihistamines, NSAIDs, and aspirin) should be used in moderation**
- **NSAIDs should be limited during deployments because they interfere with bleeding control**
- **Steroids are illegal and unsafe**
- **Steroid alternatives are to be avoided**

